

INTER-OFFICE CORRESPONDENCE

To: M.A. STIRLAND

Date: AUGUST 2, 1979

From: E.C. LEANY

Subject: U.S.G.S. JACKPILE MINE RECLAMATION  
SAMPLING PROGRAM

Here is a brief description of our sampling program at the Jackpile Mine.

AIR

One 48-hour sample is taken each month at each of four different locations as specified by Marc Nelson of the U.S.G.S. (see attached map). These samples are analyzed for total particulate, Uranium Natural, Radium-226, Thorium-230 and Lead-210. The analyses is done by our Environmental Lab, with the exception of Pb-210. At the present, we are not set up to run Lead-210. This analysis is done by an outside lab.

The samples are collected on Whatman 41 filter paper, about three meters above ground level, using Research Appliance Corporation heavy-duty samplers.

RADON-222

One 48-hour ambient radon sample is taken each month at each of the four air monitoring stations at locations specified by Marc Nelson of the U.S.G.S. (see attached map).

These samples are collected in 30-liter Tedlar bags using a modified aquarium pump, transferred to a scintillation cell, and counted using EPA approved methods. Sampling height is approximately

one meter above ground.

#### WATER

Monthly samples are taken at three ground water locations and six surface water locations as specified by Marc Nelson of the U.S.G.S. He requested one other location (mouth of Oak Canyon Wash) but we have been unable to obtain a sample there. This wash is dry except during heavy rains and, even then, the flow doesn't reach the Rio Paguete but fans out onto a flood plane.

These samples are analyzed for Radium-226, Uranium-Natural, and major and minor chemicals listed on the attached sheet.

The exploration holes, drilled by Hydro-Search to determine the effect of the holding ponds on the ground water, are too small (two inch casings) to get a pump down. Hydro-Search is going to bail these holes to get an initial sample for analysis.

#### SOIL

Our Jackpile Mine Reclamation soil sampling program was developed by the consulting firm of Dames and Moore. This document sets out in detail the location of the sampling sites, the number of sampling sites, why these sampling sites were chosen, and the parameters to be checked. A copy of this document is enclosed.

All reclaimed dumps have a covering of at least two feet of top soil.

M.A. Stirland

-3-

August 2, 1979

I'm enclosing a copy of my memo to R.D. Lynn dated January 11, 1979, and all data collected to date in our sampling program.

ELROD C. LEANY  
Senior Environmental Engineer

ECL/jms  
Enclosures